

the morning hour be deemed expired, the Journal of proceedings be approved to date, the time for the two leaders be reserved for their use later in the day and morning business be closed; that upon the conclusion of morning business, the Senate proceed to executive session to resume consideration of the Frost nomination; further, that the cloture motions filed during today's session ripen at 5:30 p.m.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### ORDER FOR ADJOURNMENT

Mr. SCHUMER. If there is no further business to come before the Senate, I ask that the Senate stand adjourned under the previous order following the remarks of Senators CARDIN, CASSIDY, and SULLIVAN.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. SCHUMER. I yield the floor.

The PRESIDING OFFICER (Ms. CORTEZ MASTO). The senior Senator from Maryland is recognized.

#### SBIR & STTR PROGRAMS

Mr. CARDIN. Mr. President, I rise today to speak about two of the Federal government's most important innovation programs: the Small Business Innovation Research program, also known as the SBIR, and the Small Business Technology Transfer program, or STTR for short.

It is very appropriate we are having this discussion as we are about to go into conference in regards to legislation that affects America's competitiveness. The SBIR and the STTR program represent the best of government industry partnerships.

The programs harness the creativity and ingenuity of America's entrepreneurs and innovators, solve the most pressing public health and national security challenges of our time.

The programs are also primed to help our Nation rebuild our domestic production capacity, to reduce our reliance on foreign supply chains on critical products, and reduce costs for the American people.

I would like to remind my colleagues that fighting inflation and rebuilding our domestic manufacturing capacity are inextricably linked.

When factories close, when products sit in shipping containers in ports, when production capacity decreases due to sick employees, and when products take longer to get from the warehouse to the store, prices go up.

I have no doubt that every Senator has heard from businesses in all sectors of the economy about solving this critical issue.

According to a recent survey the National Federation of Independent Business conducted, more than half of all small business owners reported a significant impact due to supply chain disruptions.

Thirty percent reported that the disruptions were causing a "moderate im-

pact," and 14 percent reported a "mild impact." Only 5 percent of those surveyed reported that they were unaffected by the disruptions. Of the small business owners affected by disruptions, 80 percent reported that the disruptions have caused them to miss out on business opportunities.

I am very pleased to hear that President Biden announced during his State of the Union address that rebuilding America's domestic production capacity is central to his administration's plan to fight inflation and keep our Nation secure.

SBIR and STTR are two of the best tools in the Federal government's toolkit to achieve our goal. Congress created the SBIR in 1982 to increase the participation of small businesses and Federally funded research and development opportunities in areas ranging from clean energy to advanced manufacturing.

Under the program, Federal agencies that budget at least \$100 million annually for outside research must allocate a portion—3.2 percent since fiscal year 2017—to support R&D and small businesses.

There are 11 Federal agencies and departments currently in the program, including the Department of Defense, Department of Energy, Department of Education, and Health and Human Services. The program awards funds in three phases:

Phase 1 awards are worth up to \$225,000 and may be used to conduct a feasibility study to determine an idea's scientific and commercial promise.

Phase 2 awards up to \$1.5 million and may be used to conduct further R&D on the feasibility of turning an idea into a commercial product.

And phase 3 does not involve an award of funds, but denotes that an idea is ready to move from the laboratory to the marketplace.

During the commercialization phase, small businesses must raise funding from the private sector or secure non-SBIR Federal funds.

Congress created the STTR program in 1992. While the program is similar to the SBIR in structure, utilizing a similar three-phase progression, the STTR awards go to small businesses engaging in collaborative R&D with Federal labs, as well as nonprofit educational and scientific institutions.

The program requires Federal agencies and departments to spend at least \$1 billion on outside research to allocate at least 0.45 percent of the funds to STTR opportunities.

Most people may not be familiar with SBIR or STTR, but they definitely recognize the products and companies in the programs that it helped create. Sonicare Electric toothbrush, iRobot, Lasik eye surgery, all received SBIR/STTR funding when they were startups. Qualcomm, which makes computer chips, semiconductors, and other technologies critical to our national communication infrastructure, also received funding from these pro-

grams. Progeny Systems, a small business based in Manassas, VA, received more than 300 SBIR and STTR awards to conduct research over a 20-year period. Progeny's research produced technology that drastically improves the Navy's torpedo capacity. The company is now the sole supplier of torpedos to the Navy; and, yes, it is still a small business.

This is another benefit of these programs: They expand and diversify the supplier base from which the Federal agencies source goods and services, increasing competition and investment in high-growth sectors, which reduce costs over time.

On the manufacturing front, several agencies, including NASA and the Department of Defense, are currently funding research on advanced manufacturing techniques, such as 3D printing and glass that can handle temperatures as high as 900 degrees, which would revolutionize our ability to monitor nuclear reactors and power plant furnaces to prevent accidents.

Simply put, SBIR and STTR are invaluable to our national security, and we should fund these programs adequately to rebuild our domestic supply chain. Unfortunately, authority for these critical programs will expire at the end of September unless Congress acts to extend them.

The House and Senate will go to conference soon on America COMPETES Act, which includes a 5-year extension of SBIR and STTR. I urge all my colleagues, especially those who will be conferees, to support this critical provision.

The junior Senator from Iowa has submitted a motion to instruct conferees to couple this effort to extend the SBIR program and the STTR program by 5 years with authorizing language to prevent China and Russia from acquiring critical national security technology developed by the program.

I agree with the Senator that the United States needs to safeguard technologies from being compromised and stolen, and I am pleased that the House Competes Act bill includes safeguards to prevent our adversaries from affecting our innovation—not just China and Russia, but all foreign countries of concern, including Iran and North Korea. This effort builds off of section 223 of the fiscal year 2021 National Defense Authorization Act that provides protections and requires disclosure to guard against foreign influence on Federally funded research and development.

So I will support the motion the Senator from Iowa will make; but we must recognize that if we are able to compete with China and Russia, extending the authorization for SBIR and STTR are critical. I hope she will work with me to keep this important program from shutting its doors on September 30.

I would like to add that this issue is very important to my constituents in

Maryland. Our State ranks number one in the Nation in R&D spending due to the presence of Federal and academic research institutions such as the National Institutes of Health, the National Institute of Standards and Technology, Johns Hopkins University, and the University of Maryland.

I have had many discussions with State government officials and leading scientists in Maryland who have told me that one of the most sensible steps we can take to improve the SBIR and STTR program were to make these programs permanent. The research SBIR and STTR funds often continues for several years before producing a product ready to go to the market. Researchers need to know that these programs will not disappear in the middle of years-long research projects.

It is our responsibility to make sure that we act timely so that there is no lapse in these programs or reduced funding that is critically needed for these programs' success.

Any such action would be short-sighted and would have a devastating impact on small businesses engaged in cutting-edge research Nationwide. Reducing the size of these programs or allowing them to lapse altogether would hinder our efforts to restore the production of critical products.

I recently convened a hearing of the Senate Small Business Committee to examine the impacts of supply chain disruptions on small businesses. One of our witnesses, Dr. Sridhar Kota, who leads an organization that advocates for increased public and private sector investment in America's manufacturing sector, called the SBIR and the STTR "one of the really good tools in the toolbox" and urged the committee to strengthen the programs to support even more researchers. I could not agree more.

Instead of leaving the researchers who are inventing the tools that will power the economy of the future guessing about the SBIR and STTR, we in Congress have an opportunity—and I would say an obligation—to reauthorize these programs before they expire in September. We should also make them permanent, which both the Pentagon and NASA have urged us to do. This is in our national security interest, as well as our economic interest and fairness to small businesses.

Arthur C. Clarke wrote:

New ideas pass through three periods: (1) It can't be done. (2) It probably can be done, but it's not worth doing. (3) I knew it was a good idea all along.

The SBIR and the STTR programs help visionary entrepreneurs get through one and two to reach three. Getting to three makes America stronger and more prosperous.

Let us make sure that we act in time.

With that, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The senior assistant legislative clerk proceeded to call the roll.

Mr. CASSIDY. Madam President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### ENVIRONMENTAL STANDARDS

Mr. CASSIDY. Madam President, every Senator, when she or he goes home, speaks to families feeling the crushing burden of inflation, in large part driven by fuel prices—it is certainly true when I go home to Louisiana—and they hope for a better job; one, they would like a better job, but, two, they need the extra money in order to keep up with the inflation.

There is a connection with their personal economic concerns, Putin's war in Ukraine, and China doing their best to take American jobs by ignoring environmental standards, using slave labor, giving subsidies to the businesses, making it almost impossible for American businesses to work here and compete with products made in China.

As one example of just how successful China has been, in the early 2000s, China was about 19th and 20th in manufacturing and carbon emissions.

Since then, since the early 2000s, China has become No. 1 worldwide, both in the amount of manufacturing but also in the amount of their carbon emissions.

Indeed, the increase in carbon emissions for China is more than the combined decrease of the United States, the EU, and the United Kingdom in that same period of time.

We have been doing our best to improve our environmental standards for the benefit of the whole world, and China has exploited that, using their lack of enforcement of standards to attract our jobs to their country, and yet our global greenhouse gas emissions are worse off.

Now, as I mentioned, the inflation, the hope for a better job, which is not realized, Putin's war, using energy as a national security tool, and China's concerted strategy are all interwoven. There is a nexus, and that nexus is between energy and the climate, the economy of a family and of a nation, and national security.

So if we are going to improve the financial situation for that family in Louisiana, a working family in Nevada, or any of our States and do something about our national security concerns, then we must do something about energy, and that is related to emissions.

The most effective way of doing this is looking at how China addresses their emissions and how the United States does.

Now, when I speak of emissions, I speak of the fact that we now use natural gas instead of coal, and natural gas burns much more cleanly than coal, and so, therefore, we have cleaner air in the United States than we did even 20 years ago.

But China uses coal for about 60 percent of their energy feedstock. And so

to understand China as a competitor, let's look at their economic, geopolitical, and national security strategies against us, and we are going to look at it through the prism of carbon emissions because if we think about national security without thinking about energy and the associated emissions, if we don't think about them all at the same time, we are wasting our time, just wasting our time. So, again, examining as a nexus.

There is a petrochemical plant in Louisiana that has invested heavily in lowering their emissions. We pay a little extra for the products they produce, but we accept that extra cost so that we have this cleaner environment.

Just as an example, the plastic that is on the back of my phone, that plastic is made from natural gas usually, and the process of making that has rigorous environmental standards to make sure that we protect those who live around the plant. China does not do that. They do not enforce those standards, nor, as I mentioned earlier, do they use natural gas. They are much more likely to use coal, and they preferentially build their powerplants on the Pacific coast of China. So the emissions go into the atmosphere, and they blow across the Pacific, and they land in the United States. Much of the problems of the west coast of the United States with SO<sub>x</sub> and NO<sub>x</sub> are from plants that originate their emissions in China.

And did I say it lowers their cost of production by not enforcing those? By lowering the cost of production, you attract American jobs away from the United States of America over there. And did I say it strengthens their economy? And by strengthening their economy, they have more money to invest in their military and more money to pursue their geopolitical strategy, which is to undermine the influence of the United States of America.

By not applying our emission standards to China, giving them a free pass, we are allowing them to implement their strategy.

Now, by the way, I am not against international trade. We can look at the treaties we have with Canada and with Mexico or with Central American countries, and we can see that there are certain labor and environmental standards that are embedded in those. And it is an even playing field, of sorts. So if we have a clean air standard here in the United States, there is something like that in Mexico and something like that in Canada. If we have labor standards here, we have something like that in Honduras and something like that in Guatemala. So we are still competing, but the playing field is more even.

Now, there are other benefits of trading in the Western Hemisphere.

About 40 percent of the goods that Mexico produces are reimported from the United States. There is an exchange that goes back so that the revenue that is produced in trade disproportionately comes from Mexico